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(56) Documents Cited

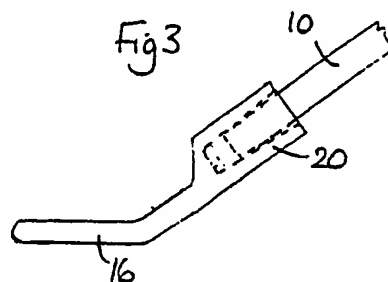
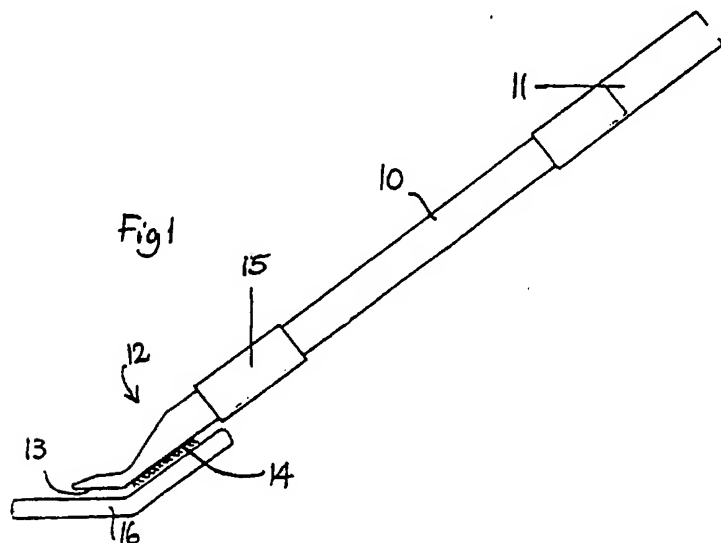
GB 2158701 A	GB 2107973 A	GB 0480875 A
EP 0313495 A	US 4852201 A	US 4031673 A
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(58) Field of Search

UK CL (Edition N) A4F FNT, A4K KBB KCB KEA KEX  
KFA KFX  
INT CL<sup>6</sup> A46B 15/00, A47K 11/10, A47L 25/00  
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(54) Disposable toilet cleaner

(57) A disposable toilet cleaner comprises an elongated tubular handle (10) and a detachable cleaning head (15). The head is formed of a material which softens and/or disintegrates in water and is then flushed away. The handle (10) has a handgrip (11) which is attached internally to a slidable sleeve (14), which can be moved downwards to detach the cleaning head (15) after use. The head (15) has a raised lip (17) and a tapered sleeve (16) into which the flat, tapered, angled surface of the handle (13) wedges directly. After detaching the cleaning head (15), the sliding sleeve (14) hygienically covers the angled surface end of the handle (13).



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Fig 1

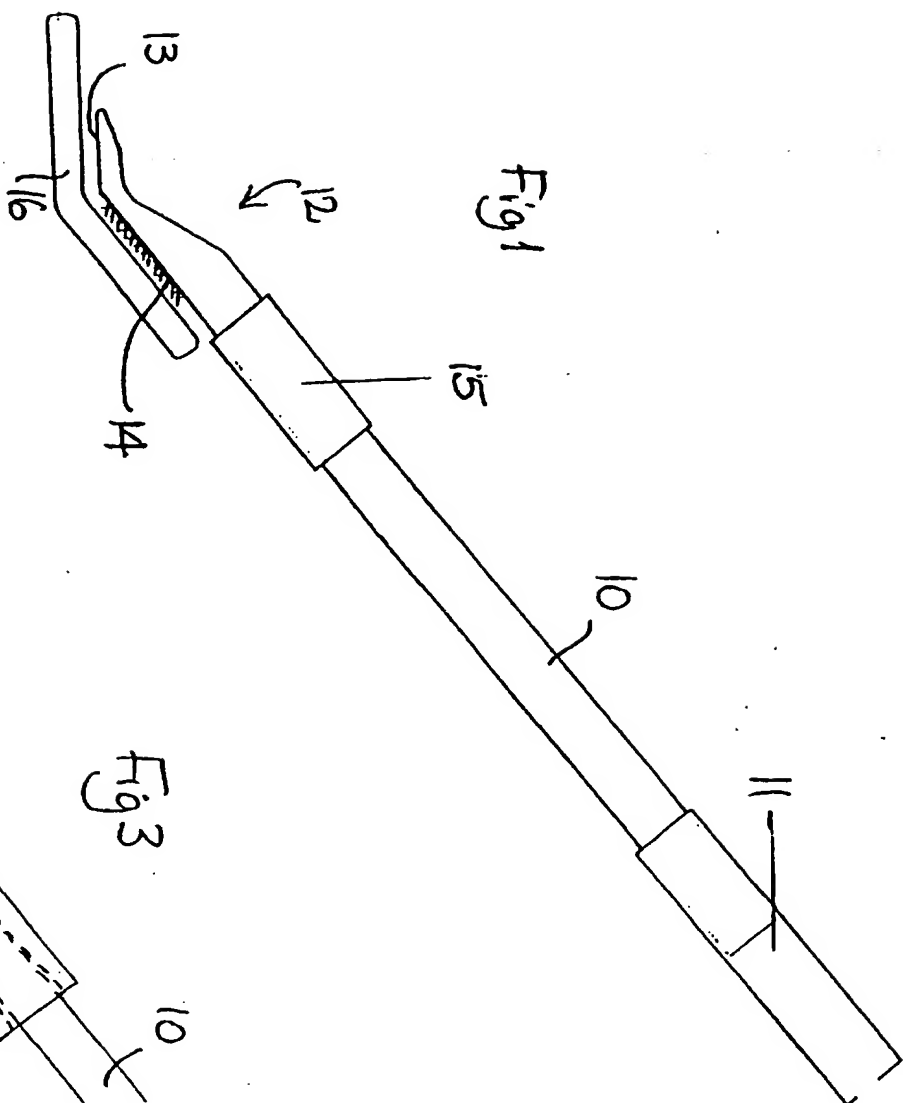


Fig 2

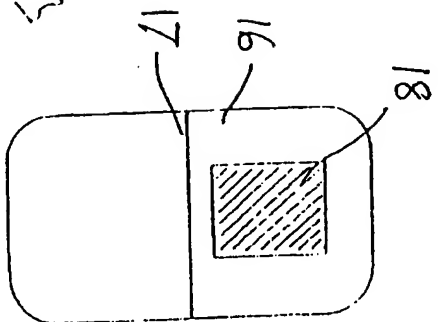
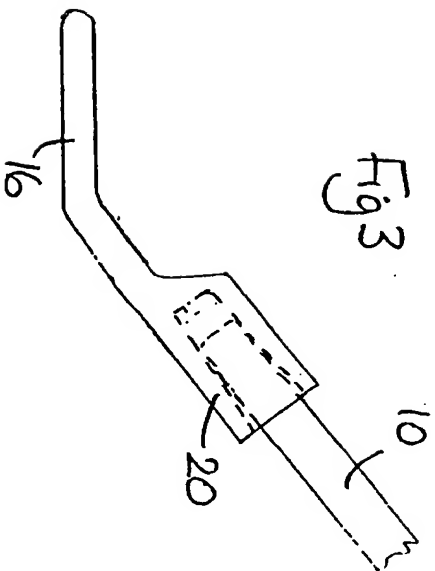
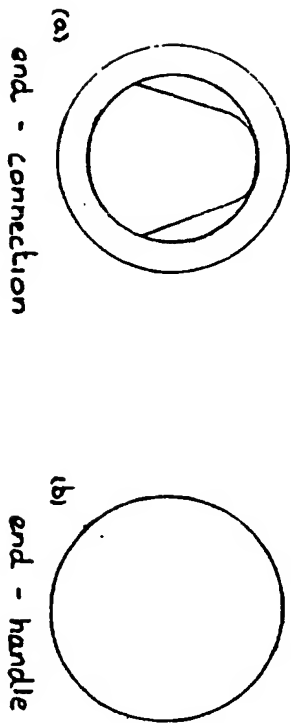
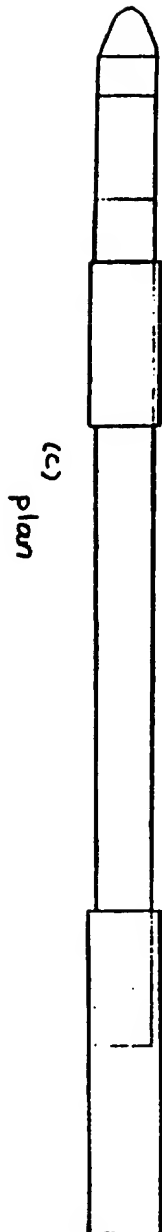


Fig 3





NAME	TYPE 'A'
DATE	1st July 91
SCALE	NONE/2:
DWG No.	2 (PLAN B

### Disposable Toilet Cleaner

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This invention relates to a disposable toilet cleaner for scouring the inside of a toilet bowl.

5 Long handled brushes are commonly kept for this purpose. However, after use there is no ready way to cleanse and disinfect the brush head which tends to stand somewhat unhygienically in a holder beside the toilet bowl.

10 The invention proposes a toilet cleaner having an elongate handle, a detachable cleaning head formed of material which softens and/or disintegrates in water, and means on the handle and/or on the cleaning head for retaining the latter on the former.

15 Preferably the cleaning head is a dry pad of fibrous material similar to papier maché, which will soften and dissolve into the water after short use, and can then be flushed away. The cleaner may also incorporate a  
20 device for detaching the remaining cleaning head after use without touching the latter.

In order that the invention shall be clearly understood, several exemplary embodiments thereof will  
25 be described with reference to the accompanying drawings, in which:

Fig. 1 shows a side view of a toilet cleaner according to the invention;

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Fig. 2 shows a plan view of a cleaning head; and

Fig. 3 shows an alternative form of head.

In Fig. 1, a toilet cleaner has a handle 10 with a handgrip 11. At the head end 12 the handle has an angled surface 13 and a "Velcro" (R.T.M.) attachment strip 14. Close to the end 12 is a slidable sleeve 15 which can be moved downwards to detach a cleaning head after use. A cleaning head 16 is held on the head end by the strip 14.

The cleaning head 16 is generally rectangular (see Fig. 2), about 7 cms x 10 cms and 2 cms thick, is solid in the dry state, is bent at a mid-line 17 and has a small fabric area 18 to engage the attachment strip 14. It is formed of a fibrous material, pressed into shape, similar to papier mache. The fibres may be soft, such as cellulose, or stiffer, such as chopped hair or nylon, or a mixture. It is relatively porous so that when in use in the toilet bowl it can be used in the manner of a brush until it eventually softens and largely disintegrates. Disintegration time in water might be between 20 seconds and five minutes. Whatever is left on the handle can be pushed off finally by forceful downwards movement of the sleeve 15.

The cleaning head may be as soft or as coarse as desired, and may be impregnated with a scouring agent, and/or a disinfecting agent, and/or a perfuming agent.

Other attachment means could be used. As seen in Fig. 3, the head 16 could have a tapered sleeve 20 into which the handle 10 wedges directly so that no additional retaining means is required. The sleeve 15 would then simply push the tapered sleeve 20 off the end of the handle after use. To ensure sufficient usage time, the sleeve 20 could be made less porous than the remainder of the head so that it would soften more slowly.

In an alternative, the handle could incorporate a clip for the head, the clip being released after use by a camming action achieved by the sleeve 15.

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## CLAIMS

1. A toilet cleaner for scouring the inside of a toilet bowl having an elongated handle and a detachable cleaning head.
2. A toilet cleaner as claimed in Claim 1 where the handle has a handgrip at one end connected internally to a slidable sleeve the other end which can be moved downwards to detach a cleaning head after use.
3. A toilet cleaner as claimed in Claim 1 or Claim 2 which is of a tubular shape approximately 2½ cms in width.
4. A toilet cleaner as claimed in Claim 1 or Claim 2 with a handle that is approximately 45 cms in length.
5. A toilet cleaner as claimed in Claim 1 or Claim 2 where the handle has one end which is inserted into the cleaning head this end has a flat tapered angled surface.
6. A toilet cleaner as claimed in Claim 1 or Claim 2 where the sliding sleeve covers the flat tapered angled surface when not in use.
7. A toilet cleaner as claimed in any preceding Claim which is made from plastic material, metal or wood, or a combination of these materials.
8. A toilet cleaner as claimed in Claim 1 which has a cleaning head, rectangular in shape, approximately 5 cms x 10 cms and 3 cms thick.
9. A toilet cleaner as claimed in Claim 1 where the cleaning head is solid in a dry state, formed of a fibrous material such as pulp, cellulose, nylon, chopped hair or a mixture of fibres.

## CLAIMS

10. A toilet cleaner as claimed in Claim 1 where the cleaning head is relatively porous, so that when in use in the toilet bowl it can be used in the manner of a brush until it softens and largely disintegrates, disintegration time being between 20 seconds and five minutes.
11. A toilet cleaner as claimed in Claim 1 where the cleaning head has a raised lip for the purpose of cleaning under the rim of the toilet bowl.
12. A toilet cleaner as claimed in Claim 1 where the cleaning head may be impregnated with a scouring agent and/or a disinfecting agent and/or a perfuming agent.
13. A toilet cleaner as claimed in Claim 1 where the cleaning head has a tapered sleeve into which the flat tapered end of the handle wedges directly, so that no additional retaining means is required.
14. A toilet cleaner substantially as herein described and illustrated in the accompanying drawings.



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**Patents Act 1977**  
**Examiner's report to the Comptroller under Section 17**  
**(The Search report)**

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**Relevant Technical Fields**

Search Examiner  
DR C L DAVIES

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KFA, KFX) A4F (FNT)

(ii) Int-Cl (Ed:6) A46B (15/00) A47K (11/10) A47L  
(25/00)

Date of completion of Search  
30 OCTOBER 1995

**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US  
patent specifications.

Documents considered relevant  
following a search in respect of  
Claims :-  
1-14

(ii) ONLINE: WPI

**Categories of documents**

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| <p><b>X:</b> Document indicating lack of novelty or of inventive step.</p> <p><b>Y:</b> Document indicating lack of inventive step if combined with one or more other documents of the same category.</p> <p><b>A:</b> Document indicating technological background and/or state of the art.</p> | <p><b>P:</b> Document published on or after the declared priority date but before the filing date of the present application.</p> <p><b>E:</b> Patent document published on or after, but with priority date earlier than, the filing date of the present application.</p> <p><b>&amp;:</b> Member of the same patent family; corresponding document.</p> |
|--|---|

Category	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2158701 A (TOSH) see whole document	1, 3, 4, 8-10, 12
X	GB 2107973 A (AGAPIOU) see Figures; page 1 lines 71-95	1, 4, 7-10, 12
X	GB 0480875 (REACH) see whole document	1, 4, 7, 9-12
X	EP 0313495 A1 (ADDUCI-AURELIO) see whole document	1, 3, 4, 7, 9, 10
X	US 4852201 (WUNDROCK) see Figures; column 4 lines 34-36	1, 3-5, 7-11
X	US 4031673 (HAGELBERG) see Figures 5-8 column 2 lines 30-56	1-4, 7-10, 12, 13
X	US 3875609 (WELLS) see Figures; column 2 lines 47-65	1, 3, 7

**Databases:**The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).